

REMARKS UNDER 37 CFR § 1.111

Formal Matters

Claims 1, 5-7, 10-13 and 41-60 are pending after entry of the amendments set forth herein.

Claims 1, 5-7, 10-13 and 41-60 were examined. Claims 1, 5-7, 10-13 and 41-60 were rejected.

Claim 58 was objected to.

Applicants respectfully request reconsideration of the application in view of the amendments and remarks made herein.

No new matter has been added.

The Telephone Interview

Applicants wish to extend their appreciation to the Examiner for the courtesy provided to Applicants' representative during the telephone interview of September 12, 2007. During the Interview, the Zhou et al. reference was discussed and the Examiner agreed to consider the above amendment in view of the clarification provided as to the meaning of test requests. It was agreed that Zhou et al. does not provide test requests in the manner currently claimed, but is limited to reading a bar code identifier to instruct the system as to the grid conformation of the array or subarrays of a microarray, but lacks different test requests as claimed. The rejection under 35 USC Section 101 was also discussed, with Applicants indicating that the present claims are not limited to an abstract idea, laws of nature or natural phenomenon, but instead fall within an enumerated statutory category (i.e., process) and, as such should not be subjected to the tests for transformation, usefulness, concreteness or tangibility.

This account is believed to be a complete and accurate summary of the interview as required by 37 C.F.R. § 1.133. If the Examiner believes that this summary is inaccurate or incomplete, Applicants respectfully request that the Examiner point out any deficiencies in her next communication so that Applicants can amend or supplement the interview summary.

The Office Action

In the Official Action of August 14, 2007, claim 58 was objected to as containing a

typographical error. In response thereto, Applicants have amended claim 58 above to change “doe not” to –does not–. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the objection to claim 58 as being no longer appropriate.

Claims Rejected Under 35 U.S.C. Section 101 (non-statutory subject matter)

Claims 1, 5-7, 10-13, 41-45, 47-54, 56-57 and 60 were rejected under 35 U.S.C. Section 101 as being directed to non-statutory subject matter. The Examiner indicated that claim 1 and claims depending therefrom do not provide a transformation of matter, nor do they provide a concrete, tangible and useful result.

Applicants respectfully traverse this ground of rejection. The USPTO Official Gazette Notice dated 22 November 2005, entitled “*Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility*” (“the OG Notice”) contains guidelines for patent examiners. Like the MPEP, the OG Notice does not have the full force and effect of law (see the OG Notice, Section I, second paragraph). This notwithstanding, review of these guidelines in the OG notice indicates that the Examiner’s rejection of claims 1, 5-7, 10-13, 41-45, 47-54, 56-57 and 60 fails to comply with the guidelines provided in the OG Notice.

Section IV of the OG Notice explains, in detail, the procedures to be followed to determine whether a claimed invention complies with the subject matter eligibility requirement of 35 USC § 101. The only references to “tangible results” in this procedure appear under Step IV(C) – “*Determine Whether the Claimed Invention Falls Within Sec. 101 Judicial Exceptions – Laws of Nature, Natural Phenomena and Abstract Ideas.*” The first thing that Step IV(C) requires the Examiner to do is to “*determine whether [a claim] covers either a Sec. 101 judicial exception.*” Only if such a determination is made, does the analysis then proceed to determine whether the claimed subject matter is nevertheless still patentable subject matter as a practical application of a Sec. 101 judicial exception. The claimed subject matter may nevertheless be patentable subject matter because, for example, (1) the claim provides a physical transformation (Step IV(C)(1)(a)); or (2) the claim produces a useful, concrete, and tangible result (Step IV(C)(1)(b)).

In the previous Office Action and in the present final office action, the Examiner did not attempt to determine whether any or all of claims 1, 5-7, 10-13, 41-45, 47-54, 56-57 and 60 cover a Sec. 101 judicial exception (Law of Nature, Natural Phenomenon, or Abstract Idea). Rather, the Examiner concluded that claims 1, 5-7, 10-13, 41-45, 47-54, 56-57 and 60 claims are drawn to a judicial exception

with no analysis or explanation supporting this position. The Examiner then directly analyzed the criteria for a practical application of a Sec. 101 judicial exception. In this analysis, the Examiner stated that the claims and the process claimed need to either effect a physical transformation and/or produce useful, concrete and tangible results. Applying the criteria for a practical application of a Sec. 101 judicial exception to Applicants' claims without first establishing that Applicants' claims are drawn to a judicial exception amounts to a failure to comply with the above-referenced examination guidelines.

Applicants submit that none of claims 1, 5-7, 10-13, 41-45, 47-54, 56-57 and 60 is drawn to a judicial exception because these claims do not cover a law of nature, natural phenomenon, or abstract idea. Claims 1, 5-7, 10-13, 41-45, 47-54, 56-57 and 60 are directed toward a method of reading signal data from a sub-array of probes on a chemical array, in accordance with test requests and instructions provided, and other non-abstract elements. It is clear that this method claimed by Applicant does not cover any law of nature or natural phenomenon. Further, it is clear from the above-recited elements of Applicant's claims, that claims 1, 5-7, 10-13, 41-45, 47-54, 56-57 and 60 are not directed to an abstract idea. Accordingly, the entire analysis as to where the claims "*provide physical transformation*" and/or "*produce a tangible result*" is not even pertinent under the above-referenced examination guidelines, because the claims are not directed to any Sec. 101 judicial exception in the first place. The Examiner's rejection under 35 U.S.C. §101 fails to comply with the examination guidelines and should be withdrawn on this ground.

Furthermore, even *if* any of the claims 1, 5-7, 10-13, 41-45, 47-54, 56-57 and 60 were directed to a Sec. 101 judicial exception, which they are clearly not, the OG Notice defines "tangible" as being the opposite of "abstract." All that is required is that the claim must set forth a practical application to produce a real-world result. Here, the claims all are practical applications producing the real-world result of reading or processing signal data for a sub-array of probes on a chemical array, and outputting results from said reading. Accordingly, assuming arguendo that claims 1, 5-7, 10-13, 41-45, 47-54, 56-57 and 60 were directed to a Sec. 101 judicial exception, which Applicants strongly assert they are not, the final result at the very least is a tangible result, particularly to those requiring feature data from a chemical array to be outputted thereto for use thereof.

Accordingly, for at least these independent reasons, Applicants submit that claims 1, 5-7, 10-13, 41-45, 47-54, 56-57 and 60 are all patentable under 35 U.S.C. § 101.

In view of the above remarks the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 1, 5-7, 10-13, 41-45, 47-54, 56-57 and 60 under 35 U.S.C. Section 101 as being directed to non-statutory subject matter, as being inappropriate.

Claims Rejected Under 35 U.S.C. Section 101 (lacking patentable utility)

Claims 1, 5-7, 10-13 and 41-60 were rejected under 35 U.S.C. Section 101 as lacking patentable utility. The Examiner asserted that being directed to non-statutory subject matter. The Examiner indicated that the results claimed are processed signal data that is not particularly linked to any particular test. Applicants respectfully traverse. As discussed during the telephone interview described above, the test requests recited correspond to specific instructions from a plurality of instructions stored in a memory, each instruction being retrievable with a different test request, wherein at least two of the instructions instruct processing or reading sub-array patterns that are different from one another. Accordingly, it is respectfully submitted that the outputted results are not just processed signal data that is not particularly linked to any test, but results of processed signal data that is specifically linked to the test request provided. Thus, a user receives results regarding particular features on the array that the user is interested in studying and using. Thus, it is respectfully submitted that the results are not "random" signal data, and that one of ordinary skill in the art would clearly find the instructed results to be useful.

In view of the above remarks the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 1, 5-7, 10-13 and 41-60 under 35 U.S.C. Section 101 as lacking patentable utility, as being inappropriate.

Claims Rejected Under 35 U.S.C. Section 112, First Paragraph

Claims 1, 5-7, 10-13 and 41-60 were rejected under 35 U.S.C. Section 101 as not supported by either a specific asserted utility of a well-established utility. Applicants respectfully traverse. It is respectfully submitted that the processing of signals from probes from a chemical array and outputting them to a user has a well-established utility, as one of ordinary skill in the art routinely uses such data for a plethora of uses when conducting biochemical research, for example. Further, as discussed during the telephone interview described above, the test requests recited correspond to specific instructions from a plurality of instructions stored in a memory, each instruction being retrievable with a different test request, wherein at least two of the instructions instruct processing or reading sub-array patterns that are different from one another. Accordingly, it is respectfully submitted that the outputted results are

not just processed signal data that is not particularly linked to any test, but results of processed signal data that is specifically linked to the test request provided. Thus, a user receives results regarding particular features on the array that the user is interested in studying and using. Thus, it is respectfully submitted that the results are not "random" signal data, and that one of ordinary skill in the art would clearly find the instructed results to be useful.

In view of the above remarks the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 1, 5-7, 10-13 and 41-60 were rejected under 35 U.S.C. Section 101 as not supported by either a specific asserted utility of a well-established utility, as being inappropriate.

Claim Rejected Under 35 U.S.C. Section 112, Second Paragraph

Claim 58 was rejected under 35 U.S.C. Section 112, second paragraph as being indefinite. The Examiner asserted that there was insufficient antecedent basis for the phrase "whether a sample that was exposed to the chemical array". In response thereto, claim 58 has been amended to additionally recite wherein "a sample has been exposed to the chemical array prior to said reading or processing the signal data".

In view of the above amendments and remarks, the Examiner is respectfully requested to reconsider and withdraw the rejection of claim 58 under 35 U.S.C. Section 112, second paragraph, as being no longer appropriate.

Claims Rejected Under 35 U.S.C. Section 102(e) (Zhou et al.)

Claims 1, 5-7, 10-13, 41, 44-45, 47-52 and 56-60 were rejected under 35 U.S.C. Section 102(e) as being anticipated by Zhou et al., US Patent Application Publication No. 2004/0218795 A1. The Examiner asserted that the limitation regarding the test request says "any element of the method and array and sub array is instructable (capable of being used for instruction.)". Applicants respectfully traverse. It is respectfully submitted that none of claims 1, 5-7, 10-13, 41, 44-45, 47-52 and 56-60 recites that any element of the method and array and sub array is instructable. Rather, claim 1, for example, recites that different instructions correspond to different test request, and that each instruction is retrievable with a different test request provided.

The Examiner further indicated that Zhou et al. discloses various test that are from a sample binding to an array. Applicants respectfully submit that the present claims do not recite or refer to

“tests” carried out individually on individual features of an array. Rather, the claims recite test requests that are inputted for retrieving instructions regarding which features to read and process. It is respectfully submitted that Zhou et al. lacks these claim elements.

Further, it is respectfully submitted that Zhou et al. also lacks the ability to select a sub-array pattern comprising a non-continuous set of features, since Zhou et al. selects a sub-array, using the user interactive technique, by having the user select corner features of the sub-array, and then joining these corners by continuous lines. Thus Zhou et al. can only select a sub-array having a continuous set of features.

In view of the above amendments and remarks, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 1, 5-7, 10-13, 41, 44-45, 47-52 and 56-60 under 35 U.S.C. Section 102(e) as being anticipated by Zhou et al., US Patent Application Publication No. 2004/0218795 A1, as being inappropriate.

Claims Rejected Under 35 U.S.C. Section 103(a) (Zhou et al. in view of Venkatesan)

Claims 42-43, 46 and 53-55 were rejected under 35 U.S.C. Section 103(a) as being unpatentable over Zhou et al., US Patent Application Publication No. 2004/0218795 A1 in view of Venkatesan, U.S. Patent No. 6,282,550. Applicants respectfully traverse this ground of rejection. Applicants respectfully submit that these claims are allowable over the applied combination of references for at least the same reasons that claim 1 is allowable over Zhou et al., as noted above, since these claims depend from claim 1 and since Venkatesan fails to make up for the deficiencies of Zhou et al. in meeting all of the recitations of claim 1.

Accordingly, in view of the above amendments and remarks, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 42-43, 46 and 53-55 were rejected under 35 U.S.C. Section 103(a) as being unpatentable over Zhou et al., US Patent Application Publication No. 2004/0218795 A1 in view of Venkatesan, U.S. Patent No. 6,282,550, as being inappropriate.

Conclusion

Applicants submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at the number provided.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-1078, order number 10021295-1.

Respectfully submitted,

Date: _____

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By: _____



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